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09/871,171	05/31/2001	Mary Lucille DeLucia	KCC-15,135	9932

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EXAMINER

ROSSI, JESSICA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-9

Office Action Summary

Application No.

09/871,171

Applicant(s)

DELUCIA ET AL.

Examiner

Jessica L. Rossi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/22/03, Amendment A.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-21 and 23-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-21 and 23-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: claims from 09/871,118.

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment dated 4/22/03. Claims 3, 22, and 32-41 were canceled. Claims 1-2, 4-21, and 23-31 are pending.

2. The rejection of claims 1-2, 5, 7-8, 12, 14, 16, and 18-21 under 35 U.S.C. 102(b) as being anticipated by Zelazoski (GB '786; of record), as set forth in the previous office action, has been withdrawn in light of Applicants arguments regarding the only one of the layers having a shrinkage extent.

3. The rejection of claims 1, 5, 7-8, and 17-21 under 35 U.S.C. 102(b) as being anticipated by Jacobs (US '178; of record), as set forth in the previous office action, has been withdrawn in light of Applicants arguments.

Claim Objections

4. Claim 24 is objected to because of the following informalities: "heterogenous" should be changed to --heterogeneous-- in line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 8-10 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for stretching a preformed second layer before bonding it to the first layer (p. 22, lines 19-22), it does not reasonably provide enablement for extruding the second layer onto the first layer where the second layer is stretched before it is bonded to the second layer.

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The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

One would appreciate that extruding the second layer onto the first layer simultaneously results in bonding of the second layer to the first layer. However, this bonding is distinct from the “bonding” disclosed and/or claimed in the present invention, which involves bonding a preformed second layer to the first layer by thermal, adhesive, or differential speed bonding (p. 18, lines 3-5); note that the specification refers to extruding as “applying” and makes it clear that “applying” is distinct from “bonding” the second layer to the first layer such that “applying” and “bonding” are never done to the same layer (p. 23, lines 5-6). Therefore, it is not understood how the second layer could possibly be stretched before it is extruded since it only constitutes a layer after it is extruded. It appears that Applicants inadvertently forgot to cancel these claims upon amending claim 1 to include the extruding limitation. Applicants are asked to clarify. It is suggested to cancel claims 8-10.

7. Claims 7-10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 7, the present specification teaches forming the composite by bonding, laminating, or applying the second layer to the first layer (p. 23, lines 5-6). The specification teaches bonding a preformed second layer to the first layer by thermal, adhesive, or differential speed bonding (p. 18, lines 3-5). The reference also teaches applying a second layer to the first layer by extrusion or spraying (p. 17, lines 21-22). However, the specification does not have

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support for applying (i.e. extruding) **and also** bonding the applied second layer to the first layer, as now claimed in the present invention. It is believed that Applicants inadvertently forgot to cancel these claims upon amending claim 1 to include the extruding limitation. Applicants are asked to clarify. It is suggested to cancel claims 7-10.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 8, it is unclear as to how the second layer can be stretched before it is extruded/bonded onto the first layer. Applicants are asked to clarify.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 2, 4-8, 12, 14-16, 18, 21, 24 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Breveteam (GB 1293456; of record).

With respect to claim 1, Breveteam is directed to a composite material for accommodating passage of fluids, which can be used for packaging (note reference describes material as being “permeable”, being a “net”, and having apertures formed through all layers comprising the material; p. 2, lines 114-115). The reference teaches forming a first film layer

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having a first shrinkage extent (p. 3, lines 50-52 and 56), extruding a second hot melt adhesive film layer onto the first layer with the second layer having a second shrinkage extent different from the first (note that reference refers to adhesive as “extra layer” which is equivalent to the “further web material” that has a lesser tendency to shrink than first film layer; p. 3, lines 105-110), forming a plurality of apertures through both film layers (p. 3, lines 109-110; p. 2, lines 61-62; p. 3, lines 14-15 and 32-34 and 40-43), and heating to shrink both film layers (p. 3, lines 13-14).

Regarding claim 2, the reference teaches slitting to form the apertures (p. 40-42).

Regarding claim 4, the reference teaches forming the apertures through both the first and second layers (p. 3, lines 106-110).

Regarding claim 5, the reference teaches heating to shrink (p. 1, lines 41-46).

Regarding claim 6, the reference teaches heating with infrared (p. 5, lines 23-24).

Regarding claim 7, the reference teaches the second layer being bonded to the first by thermal bonding (p. 3, lines 110-114).

Regarding claim 8, the reference teaches stretching the film prior to bonding (p. 1, lines 62-65).

Regarding claim 12, the reference teaches making slits through the second layer and opening the slits to form apertures (p. 3, lines 106-110; p. 40-42).

Regarding claim 14, the reference teaches the slits being formed in all of the claimed directions (Figures 1-10).

Regarding claim 15, the reference teaches forming slits in the first layer (p. 3, lines 106-110).

Regarding claim 16, the reference teaches the first layer comprising polypropylene (p. 3, lines 56-57).

Regarding claim 18, the reference teaches the second layer being a film (p. 3, lines 106-107).

Regarding claim 21, the reference teaches the first layer comprising a nonwoven web (p. 3, lines 34-35 and 50-52).

With respect to claims 24 and 29, the reference teaches providing a first homogeneous component, such as a polyethylene film, having a first shrinkage extent (p. 3, lines 50-52 and 56), providing a second homogeneous component, such as a paper web or hot melt adhesive film, having a second shrinkage extent different from the first (p. 3, lines 87-90 and 106-110), forming a heterogeneous material by combining the first and second components (p. 3, lines 89-94 and 106-110), forming a plurality of slits in the heterogeneous material (p. 3, lines 89-90 and 106-110; p. 2, lines 61-62; p. 3, lines 14-15 and 32-34 and 40-43), and heating to shrink both the first and second components to open the slits into apertures (p. 3, lines 13-14).

Regarding claim 26, the reference teaches forming the slits in all of the claimed directions (Figures 1-10).

Regarding claim 27, the reference teaches shrinking the first component relative to the second component (p. 3, lines 87-88).

Regarding claim 28, the reference teaches shrinking the second component relative to the first (p. 3, lines 87-88).

Claim Rejections - 35 USC § 103

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claims 11, 13, 23, 25, and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breveteam.

Regarding claims 11 and 23, selection of aperture dimensions would have been within purview of the skilled artisan depending on the desired flow rate through the composite.

Regarding claims 13 and 25, selection of a particular method for forming the slits would have been within purview of the skilled artisan absent any unexpected results. The particular slitting method of claim 13 is taken as conventional in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to control the degree of stretch (as well as to provide for various sized apertures) in Breveteam as such would have afforded one the ability to produce various kinds of finished apertured assemblies dependent upon ones needs.

Regarding claim 30, Breveteam teaches applying a topsheet to the heterogenous material before heating (p. 3, lines 115-116), where this topsheet has a shrinkage extent different from that of the first homogeneous component (p. 3, lines 87-88). It would have been obvious to have the topsheet comprise a material that is also different from that of the second homogeneous component in order to produce a composite with specific characteristics where the skilled artisan would have appreciated that the topsheet would likely have a shrinkage extent different from that of the second homogeneous component.

Regarding claim 31, selection of a particular material for the topsheet would have been within purview of the skilled artisan.

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14. Claims 1-7, 9-12, 13-15, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breveteam in view of Kasai et al. (US 6503431).

With respect to claim 1, Breveteam also teaches forming the composite material by bonding a film layer, such as polyethylene, having a heat shrinkage extent to a paper layer having a heat shrinkage extent different from that of the film (p. 3, lines 87-81; p. 2, line 15), forming apertures through both layers (p. 3, lines 90-91), and shrinking both layers (p. 3, lines 90-91). The reference is silent as to extruding the film onto the paper.

It is known in the packaging art to extrude polyethylene onto paper webs thereby making use of the film formability of polyethylene, as taught by Kasai (column 1, lines 13-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to extrude the polyethylene film of Breveteam onto the paper web because such is known in the art, as taught by Kasai, where such an application technique allows for uniform coating of the paper.

Regarding claims 2, 4-6, 12, and 14-15, Applicants are directed to paragraph 11 above.

Regarding claim 7, Breveteam teaches bonding the paper to the film by thermal bonding (p. 3, lines 93-94).

Regarding claims 9-10, the amount of stretching would have been within purview of the skilled artisan at the time the invention was made.

Regarding claim 11, aperture dimensions would have been within purview of the skilled artisan depending on the desired flow rate through the composite.

Regarding claim 13, selection of a particular method for forming the slits would have been within purview of the skilled artisan absent any unexpected results. The particular slitting method of claim 13 is taken as conventional in the art. It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to control the degree of stretch (as well as to provide for various sized apertures) in Breveteam as such would have afforded one the ability to produce various kinds of finished apertured assemblies dependent upon ones needs.

Regarding claim 17, selection of a particular material for the film would have been within purview of the skilled artisan depending on the desired characteristics of the finished product.

Regarding claim 18, Breveteam teaches the second layer being a film.

Regarding claim 19, Breveteam is silent as to fillers in the film. The skilled artisan would have appreciated that adding fillers to materials such as films is well known and conventional and the skilled artisan would have been motivated to add fillers to the film of Breveteam because this allows the characteristics of the film to be manipulated for its intended purposes.

Regarding claim 20, selection of a particular filler would have been within purview of the skilled artisan depending on the chosen film.

Regarding claim 21, Breveteam teaches the first layer being nonwoven (paper).

15. Claims 1, 4-5, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bevins et al. (US 6491777) in view of Fahrenkrug et al. (US 5376198).

With respect to claim 1, Bevins is directed to forming a structured composite material that serves as a liquid transfer layer 22 for disposable garments, such as diapers (abstract; column 5, lines 30-31). The reference teaches extruding fibers to form a first layer 8 having a first shrinkage extent (column 4, lines 3-4), extruding fibers onto the first layer to form a second layer 14 having a second shrinkage extent different from the first (column 4, lines 18-20), and shrinking the first layer to a greater extent than the second layer to form the puckered/creped

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composite material (column 4, lines 18-25). The reference is silent as to forming apertures through the second layer.

It is known in the art to form apertures 12 through a **nonwoven fibrous** liquid transfer layer 6, which can be incorporated into a diaper, because these apertures allow rapid fluid transfer therethrough and they eliminate or minimize liquid flow in the reverse direction, as taught by Fahrenkrug (Figure 3; column 6, lines 5-10 and 49-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form apertures through the first and second layers comprising the fibrous liquid transfer layer of Bevins because such is known in the art, as taught by Fahrenkrug, where these apertures would allow for rapid fluid transfer therethrough while also eliminating or minimizing liquid flow in the reverse direction.

Regarding claim 4, Applicants are directed to claim 1 above.

Regarding claim 5, Bevins teaches heating to shrink both layers (column 4, lines 18-25).

Regarding claim 7, Bevins teaches thermal bonding (column 4, lines 8-10).

Regarding claim 11, the size of the apertures would have been within purview of the skilled artisan depending on the desired rate of fluid transfer.

16. Claims 2, 6, 12-16, and 23-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bevins and Fahrenkrug as applied to claim 1 above, and further in view of Zelazoski et al. (GB 2284786; of record).

Regarding claims 2 and 12, Bevins in view of Fahrenkrug is silent as to how the apertures are formed. It is known in the art to form a liquid transfer layer for a diaper by bonding a slit nonwoven layer to another nonwoven layer and shrinking either layer thereby forming puckers/crepes in the composite, which result in opening of the slits into apertures, as taught by

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Zelazoski (see above), where the advantages of slits versus apertures resides in the ability to vary the degree of opening of the layers through shrinking and the need for little or no material removal (p. 7, lines 31-35; p. 9, lines 3-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the apertures in the transfer layer of Bevins and Fahrenkrug by slitting where the slits would open during the heat shrinking step of Bevins because such is known in the art, as taught by Zelazoski, where slitting allows the degree of opening to be varied through shrinking and it eliminates the need to remove material from the layer.

With respect to claims 24 and 29, Applicants are directed to paragraph 16 above for a complete discussion of Bevins. It is noted that the first layer of Bevins is homogeneous (PET having a denier of 4-10; column 3, lines 40-45) thereby constituting a first homogeneous component while the second layer of Bevins is also homogeneous (PET having denier of 10-15; column 3, lines 47-53) thereby constituting a second homogeneous component such that extruding the second layer onto the first layer results in a heterogeneous material; therefore, all the limitations of claims 24 and 29 were addressed with respect to claims 1, 5, and 12 above.

Regarding claim 6, selection of a heating source would have been within purview of the skilled artisan absent any unexpected results; it being noted that the sources claimed are well known and conventional.

Regarding claims 13 and 25, selection of a particular method for forming the slits would have been within purview of the skilled artisan absent any unexpected results. The particular slitting method of claim 13 is taken as conventional in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to control the degree of stretch (as

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well as to provide for various sized apertures) in Bevins as such would have afforded one the ability to produce various kinds of finished apertured assemblies dependent upon ones needs.

Regarding claims 14 and 26, Applicants are directed to paragraph 5 of the previous office action.

Regarding claim 15, see claim 1 above.

Regarding claim 16, Bevins teaches the first layer comprising polypropylene (column 3, lines 60-62).

Regarding claim 23, the size of the apertures would have been within purview of the skilled artisan depending on the desired rate of fluid transfer.

Regarding claims 27-28, Bevins teaches that the arrangement of the layers/components can be reversed (column 4, lines 34-36); therefore, the reference teaches shrinking the first component relative to the second and vice versa.

Regarding claim 30, Bevins is silent as to applying a topsheet to the heterogeneous material before heating where the topsheet has a shrinkage extent different from the first and second shrinkage extents. It is known in the art to apply a topsheet 4 to a liquid transfer layer 6, as taught by Fahrenkrug (Figure 3; column 5, lines 54-56). It would have been obvious to apply a topsheet to the transfer layer of Bevins because such is known in the art, as taught by Fahrenkrug, where the topsheet is bulky/soft enough to be in contact with the wearer. The skilled artisan would have appreciated that the topsheet comprises materials different from those of the transfer layer and therefore would have a shrinkage extent different from the transfer layer. Applying the transfer layer before heating would have been obvious because it would be easier to bond the topsheet to the transfer layer before it becomes puckered/creped from shrinking.

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Regarding claim 31, Fahrenkrug teaches the topsheet can be a film (column 5, lines 54-58).

17. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bevins and Fahrenkrug as applied to claim 1 above, and further in view of Kurihara et al. (US 5789328).

Regarding claims 8, Bevins is silent as to stretching the second layer before bonding it to the first layer. It is known in the art to form nonwoven webs by bonding a first fiber layer having a first shrinkage extent to a second fiber layer having a shrinkage extent greater than the first and heating to shrink the layers to form a structured composite where the second layer is stretched before bonding, as taught by Kurihara (column 4, lines 57-65; column 5, lines 5-6 and 15-18; column 8, lines 52-57).

It would have been obvious to the skilled artisan to stretch the second layer of Bevins before bonding because such is known in the art, as taught by Kurihara, where this would further facilitate shrinking of the second layer upon heating.

Regarding claims 9-10, the amount of stretching would have been within purview of the skilled artisan.

18. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bevins and Fahrenkrug as applied to claim 1 above, and further in view of Pike et al. (EP 0586924; provided in IDS).

Regarding claim 17, Bevins is silent as to the second layer comprising ethylene-propylene random copolymer. Selection of particular materials would have been within purview of the skilled artisan. However, it would have been obvious to use the materials claimed in the present invention because such are known in the art, as taught by Pike (p. 5, lines 30-31).

Double Patenting

19. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

20. Claims 1-2, 4-21, and 23-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 7-11, 14-15, 18-19, 24-26, and 28 of copending Application No. 09/871,118 in view of Breveteam.

Applicants are directed to paragraphs 11 and 13-14 above for a complete discussion of this reference. It would have been obvious to extrude the second layer and form apertures in the composite/material of the copending application or form slits which open upon shrinking to form apertures because such is known in the art of making layers that accommodate passage of fluids, as taught by Breveteam, where extrusion allows for uniform coating and apertures allow the fluid transfer rate to be increased.

This is a provisional obviousness-type double patenting rejection.

21. Claims 1, 4-5, 7-11, and 16-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, 7-11, 14-15, 17-19, 24-26, and 28 of copending Application No. 09/871,118 in view of Bevins et al. and Fahrenkrug.

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Applicants are directed to paragraph 15 above for a complete discussion of these references. It would have been obvious to one of ordinary skill in the art at the time the invention was made to extrude the second layer and form apertures through the composite because such is known in the art, as taught by Bevins and Fahrenkrug, where extrusion allows for uniform coating and apertures allow for rapid fluid transfer therethrough while also eliminating or minimizing liquid flow in the reverse direction.

This is a provisional obviousness-type double patenting rejection.

22. Claims 2, 6, 12-15, and 23-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4, 11, 14, and 24 of copending Application No. US 09/871,118 in view of Bevins et al., Fahrenkrug, and Zelazoski et al.

Applicants are directed to paragraph 16 above for a complete discussion of these references. It would have been obvious to form the apertures by slitting then shrinking to open the slits because such is known in the art, as taught by Zelazoski, where slitting allows the degree of opening to be varied through shrinking and it eliminates the need to remove material from the layer.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

23. Applicant's arguments filed 4/22/03 have been fully considered but they are not persuasive.

24. On page 10 of the arguments, Applicants argue that Zelazoski fails to teach a first layer and a second layer having different shrinkage extents.

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The examiner respectfully points out that Zelazoski was only used to show it is known in the art to form apertures in a liquid transfer layer by slitting then shrinking the material to open the slits into apertures.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **703-305-5419**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

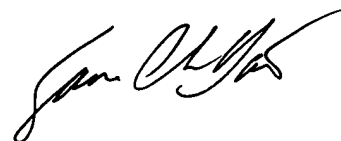
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jessica L. Rossi
Patent Examiner
Art Unit 1733



jl
June 2, 2003



SAM CHUAN YAO
PRIMARY EXAMINER